

Part IV. 2003 Mitigation Goals and Objectives Review

The 2003 Wasatch Front Pre-Disaster Mitigation Plan required each county to develop a prioritized set of mitigation goals, objectives and actions for each identified hazard. Below is a review of each of the goals and actions and a status update.

Davis County

Hazard: Earthquake

Problem Identification: Davis County is located in the heart of the Wasatch Fault between the shores of the Great Salt Lake and the foothills of the Wasatch Mountain Range. The majority of the population lives within 5 miles of the fault. The only major traffic artery running north and south, and numerous water and petroleum pipelines either cross over or run within ½ mile of the fault. Five moderately sized petroleum refineries located in the south end of the county are subject to severe damage from ground movement and liquefaction. A major earthquake in the area would result in hundreds of billions of dollars in damage to residential structures, industry, and of critical infrastructure, and likely some loss of life.

Goal #1: Reduce loss of life and limit damage to property.

Objective 1.1: Priority HIGH, Provide education on seismic hazards and mitigation, to Davis County residents and homeowners.

Action: Provide earthquake public education

Status: Accomplished. The county distributes printed materials at preparedness fairs, civic and church group meetings.

Objective 1.2: Priority MEDIUM, Increase quality and quantity of available natural hazards data to facilitate better decision-making.

Action: Update fault zone and liquefaction maps for the county.

Status: Not Accomplished. This action can only be accomplished should the Utah Geological Survey update the maps & data and there is no evidence that has occurred since 2003.

Problem Identification: A number of critical structures, which contain fire apparatus within the county do not meet current building criteria and could sustain considerable damage or suffer total destruction from ground shaking. These fire department buildings exist in Clinton, South Weber and Layton. Identify other at risk critical infrastructure facilities, including water distribution systems.

Goal #2: Protect emergency response capabilities and critical facilities.

Objective 2.1: Priority HIGH, Provide fire department with buildings that meet current construction codes, ensuring response capability of fire apparatus and personnel after an earthquake. Identify and prioritize other critical lifeline infrastructure which is at risk, such as water collection, storage, treatment and distribution facilities.

Status: Ongoing. The Layton Fire Department received a PDM Grant in 2007 to seismically upgrade station #53. The South Davis Metro Fire Department has constructed a new fire station, #85, and currently constructing another station, #82, designed to current seismic standards. The former stations were not compliant. Budget limitations have delayed Clinton, and South Weber fire station updates. The Weber Basin Water Conservancy District (WBWCD) received a FEMA grant to prepare a District wide multi-hazard mitigation Plan which will address earthquake and other hazards.

Hazard: Wildland Fire

Problem Identification: Much of the inhabitable land within Davis County is on the east bench. Numerous homes and subdivisions have been and are being constructed in these areas. Many of these structures border the Forest Service boundary or are in areas of old scrub oak growth. The potential for catastrophic damage from wildfire increases yearly.

Goal #1: Reduce or eliminate the threat of a wildfire, resulting in loss of life and property.

Objective 1.1: Priority HIGH, Increase the level of wildfire knowledge for home and business owners in the Urban Wildland Interface area.

Status: Ongoing: The county Emergency Management Coordinator is also the County Fire Marshal and issues a yearly wildland fire safety media release. The LEPC works closely with all Public Safety throughout the county involving Wildland Fire Safety, preparedness and prevention regarding wildland fire responses that may occur.

Objective 1.2: Priority MEDIUM, Provide wildfire training to city and county planning and zoning officials and staff.

Status: Ongoing. The local chapter of American Planning Association has provided this training.

Problem Identification: In much of the county, there is little, if any, natural break between wildland Forest Service areas and residential areas. There are some old roads and “fire breaks” that are in ill repair, or have not been maintained for years. They have become ineffective as fire breaks and hazardous to fire apparatus.

Goal #2: Fuel modification within prioritized watersheds.

Objective 2.1: Priority HIGH, Widen and stabilize the firebreak between Farmington Canyon and Bountiful. Widen and stabilize the firebreak north of Farmington Canyon to the Weber River.

Status: Ongoing. A new firebreak road was completed from Farmington Canyon to Centerville. Centerville plans to continue the firebreak southward through the city. Continuation south through Bountiful isn't planned at this time. Continuation of the firebreak north from Farmington Canyon is planned as funding becomes available. The WBWCD mitigation Plan will address water delivery reliability for firefighting following a major regional earthquake.

Hazard: Flooding

Problem Identification: The potential for flooding due to spring runoff, and especially from summer thunderstorms, is high in certain areas of the county. Existing flood plain maps do not indicate areas of flooding potential that exist, in large part due to development, that are not near creeks and the Great Salt Lake. Also not addressed is are the WBWCD aqueduct and canals that are a potential source of flooding.

Goal #1: Reduce or eliminate loss of life and property damage due to flooding.

Objective 1.1: Priority HIGH, Increase the level of understanding in homeowners through public education and awareness programs.

Status: Ongoing. Printed materials are distributed at community preparedness fairs, civic and church organization functions.

Objective 2.1: Priority HIGH, Reduce loss of life and property damage due to flooding by providing current building code and NFIP maps to cities. Encourage city planners to update building codes. Update county flood maps to include contour lines.

Status: Ongoing. Building codes are updated regularly as mandated by the state. No known flooding mandates exist at the community level except for Layton City which has an Ordinance that prohibits construction in 100-year floodplains. FEMA flood maps and data were updated for all Davis County in 2006-2007. All of the maps have a 2 foot contour.

Objective 2.2: Priority MEDIUM, Lessen the impacts of flood damage caused by water canal and pipeline failure through regular inspections.

Status: Ongoing. Continually occurring.

Hazard: Landslide

Problem Identification: The east bench of Davis County is home to numerous canyons, large and small. They were, of course, formed over thousands of years by debris flows and mudslides. Now, many hundreds of homes and other structures, pipeline, power lines, and roadways have been constructed on top of or through the alluvial fans produced by these events. Nature is not done constructing these canyons. Landslides and debris flows will continue to occur over time, thus threatening residents and critical infrastructure.

Goal #1: Avoid risk or exposure to landslides through informed planning and zoning decisions.

Objective 1.1: Priority HIGH, Provide city-planning commissions with information concerning landslides and debris flows. Encourage cities to adopt a standard of requiring geo-technical studies in identified landslide and debris flow areas.

Status: Ongoing. This information is provided upon request. The Utah Geologic Survey (UGS) no longer reviews geology reports submitted to counties and cities when requested and must be privately contracted. The UGS also assists communities in writing geologic hazard ordinances.

Problem Identification: There are a number of canyons that do not currently have debris basins constructed to contain debris flows. Others are insufficient in size. These need to be built or reconstructed in order to provide protection to residents. In addition, WBWCD maintains the Davis Aqueduct which runs from the mouth of Weber Canyon south to Bountiful. Any event that caused a break in the line would result in significant flooding. This hazard will be quantified in the WBWCD multi-hazard mitigation Plan which will be developed in 2009-2010. The WBWCD has also identified landslide hazards along the Gateway Canal near the mouth of Weber Canyon. The canal supplies water to the Davis Aqueduct to the south as well as the Weber Aqueduct to the north.

Goal #2: Reduce or eliminate landslide damage due to debris flows.

Objective 2.1: Priority MEDIUM, Reduce loss of life and damage to property by providing a means to control debris and water from debris flows through the construction of new debris basins and the retrofit of others.

Status: Ongoing. Davis County Public Works has installed closed circuit TV monitors on several debris basins. Centerville is planning to construct a debris basin on Centerville Creek as the budget allows.

Objective 2.2: Priority HIGH, Mitigate the impact of flood damage caused by a catastrophic failure of the Weber Basin Aqueducts.

Status: Ongoing. The WBWCD has received a mitigation planning grant. Identification of methods to mitigate hazards posed by landsliding will be one aspect of this Plan. The District will identify feasible mitigation strategies for possible flooding due to aqueduct failures. The District is also developing a feasibility plan for mitigating landslide hazards along the Gateway Canal.

Hazard: Severe Weather

Problem Identification: Most presidential disaster declarations are the result to severe weather. Davis County is prone to the effects of severe weather. These are usually thunderstorms and snowstorms. However, the county is also prone to extremely severe wind events referred to as "East Winds." Historically, Davis County has experienced wind gusts of over 110 mph and sustained winds of 80+ mph. These can result in millions of dollars in damage. On average Davis County experiences at least one severe wind event each year. Severe storms result in secondary and tertiary problems mostly dealing with power, heating and travel. Davis County has only one main north/south roadway thru the county. Severe weather has resulted and will continue to result in serious travel problems, as well as power and heating difficulties.

Goal #1: Assist residents to protect themselves from the effects of severe weather.

Objective 1.1: Priority HIGH, Coordinate with all cities in the county to gain participation in the National Weather Service Storm Ready program.

Status: Accomplished. Davis County will be presented the Storm Ready Certification in 2008.

Objective 1.2: Priority MEDIUM, Encourage avalanche safety preparedness for county backcountry users.

Status: Ongoing. The County has worked closely with the US Forest Service to improve avalanche preparedness efforts for those that use Davis County's backcountry in the winter. County search and rescue is frequently called out to search for the lost individual. The county hopes to develop an introductory-level avalanche awareness training program.

Problem Identification: High winds can result in serious problems throughout the county. Communications for emergency responders have been severely hampered in the past by damage to communication infrastructure.

Goal #2: Ensure severe weather communication

Objective 2.1: Priority MEDIUM, Harden communications capabilities to ensure post event functionality. Establish alert and notification procedures/system to notify emergency responders, flood control, and emergency managers.

Status: Ongoing. Davis County has acquired the City Watch program, a reverse 911 system used emergency public notification. The county is planning to purchase NOAA weather radios for all Public Safety agencies. There has been no progress on hardening county communications capabilities.

Morgan County

Hazard: Flood

Problem Identification: Morgan County has two major rivers (East Canyon, Weber) that threaten communities during spring runoff.

Goal #1: Lessen impact from flooding.

Objective #1: Priority HIGH, To reduce flood threat to Morgan County.

Action #1: Maintenance of channels and bridge openings.

Status: Ongoing, Morgan County Each Year cleans out debris and dead trees that have fallen into the stream channels as citizens make them aware of the problems.

Action #2: Work with Weber Basin to increase flood storage area.

Status: Not accomplished.

Action #3: Advise residents and develop outreach materials on the availability of flood insurance.

Status: Ongoing: The County encourages at-risk residents to obtain flood insurance.

Goal #2: Reduce threat of unstable canals throughout the county.

Objective#2: Priority MEDIUM, Identify countywide canal systems.

Action: Map and assess for structural integrity canal systems in the County.

Status: Ongoing: The Weber Basin Water Conservancy District owns the largest canal system in the county and it is constantly monitored by them. The County does not assess privately owned canals.

Hazard: Earthquake

Problem Identification: Critical facilities (public safety, commercial buildings and schools) need to be made less vulnerable from the impact of earthquakes to allow a more timely response, and to decrease the impact to lives.

Goal: Reduce loss of life and damage to property.

Objective: Priority HIGH, Decrease the Negative Effect of Earthquakes within the County.

Action #1: Begin an Earthquake awareness campaign to include awareness of availability of earthquake insurance.

Status: *Not accomplished.*

Action #2: Facilitate a Pre-Earthquake damage assessment to evaluate or retrofit critical facilities.

Status: *Not accomplished.*

Action #3: Work with the county's businesses to ensure proper earthquake preparedness training.

Status: *Not accomplished.*

Hazard: Dam Failure

Problem Identification: Federal, state, and private dams can impact Morgan County. Morgan County has poor community awareness and response systems.

Goal: Reduce loss of life and limit damage to property.

Objective: Priority MEDIUM, To increase community awareness of the (Federal, State and Private) dam's that will impact the County.

Action #1: Educate community of evacuation routes.

Status: *Not accomplished.*

Action #2: Improve emergency notification systems/public awareness dam information.

Status: *Ongoing. The County has been working to obtain funding to develop a Reverse 911 system that could be used in time of emergency.*

Action #3: Improve Inundation Maps.

Status: *Accomplished. The County has obtained flood inundation maps in digital format.*

Hazard: Drought

Problem Identification: The residents' of Morgan County are unaware of the water conservation options that are available to them.

Goal: Decrease the impact of drought on the community.

Objective: Priority LOW, Develop and promote water conservation measures.

Action #1: Promote water conservation utilizing Drought Contingency Plan.

Status: *Not accomplished.*

Action #2: Promote the use of the secondary water system.

Status: *Not accomplished.*

Hazard: Severe Weather

Problem Identification: Snowstorms, Hail, Thunderstorm/Lighting, Heavy Rain, Wind and Avalanche impact Morgan County. This is intensified by Morgan County's remote location.

Goal: Assist residents protect themselves from the affects of severe weather.

Objective: Priority MEDIUM, Lessen the impact of severe storms to residents and businesses in Morgan County.

Action #1: Increase residents' awareness of the need for food storage for use during severe storms.

Status: *Ongoing. The County actively promotes Individual and Family Preparedness.*

Action #2: Increase residents' awareness of where emergency shelters are located.

Status: *Not accomplished.*

Action #3: Have all cities in the County participate in the FEMA Storm Ready program.

Status: *Ongoing. The County has conducted a Storm Ready program evaluation to determine actions that need to be undertaken in order to obtain certification.*

Action #4: Encourage avalanche preparedness for county backcountry users.

Status: *Not accomplished.*

Hazard: Wildfire

Problem Identification: Continuing non-compliance with existing building codes and fire codes.

Goal #1: Building and Fire Code Compliance

Objective: Priority HIGH, Increase compliance with existing building and fire codes.

Action #1: Develop and enforce current local, state and national codes.

Status: *Ongoing. The County Building Code now requires sprinklers in all new construction including private dwellings.*

Goal #2: Wildfire Community Education

Objective: Priority HIGH, Reduce overall risk from wild fire through education programs, especially in the Mt. Green, Trappers Loop, area east of Porterville, and East Canyon.

Action #1: Public awareness through "Fire Wise" programs.

Status: *Ongoing. The County promotes the Fire Wise program.*

Action #2: Provide wildfire training to city and county planning and zoning officials and staff.

Status: *Accomplished. The County Fire Department worked with the Community Development Department to define the Wildland Interface Zones.*

Hazard: Landslide

Problem Identification: Morgan County has a significant threat of landslides. The community of Mt. Green and Trappers Loop Road (Highway 167) as well as critical pipeline routes can be impacted by landslides.

Goal: Avoid risk or exposure to landslides through informed planning and zoning decisions.

Objective #1: Priority LOW, Educate planning commissions.

Action: Provide City and County Planning Commissions with information concerning landslides.

Status: *The County has identified landslide zones and requires geotechnical studies on identified threat areas prior to the issuance of building permits.*

Objective #2: Priority MEDIUM, Monitor historical landslide areas.

Action: Evaluate current landslide maps to verify accuracy.

Status: *Accomplished. The maps have been revised and updated in most areas.*

Salt Lake County

Hazard: Dam Failure

Problem Identification: National statistics show that overtopping due to inadequate spillway design, debris blockage of spillways, or settlement of the dam crest account for 34% of all dam failures. Foundation defects, including settlement and slope instability, account for 30% of all failures. Piping and seepage cause 20% of national dam failures. This includes internal erosion caused by seepage, seepage and erosion along hydraulic structures, leakage through animal burrows, and cracks in the dam. The remaining 16% of failures are caused by other means.

Goal #1 Include dam failure inundation in future County planning efforts.

Objective 1.1: Priority MEDIUM, Review current State Dam Safety information on all identified high hazard dams in the County.

Action: Include dam inundation maps in current County and City and Special Service District EOPs.

Status: Accomplished for the County EOP, ongoing for City EOP's, and partially accomplished for Special Service District EOP's. The Central Utah Water Conservancy District's Red Butte Dam failure EOP has and flood inundation map.

Hazard: Drought

Problem Identification: Salt Lake County is currently in the fifth year of drought conditions. Measures must be taken to conserve and address water shortages for both culinary and agricultural use.

Goal 1: Reduce hardships associated with water shortages.

Objective 1.1: Priority HIGH, Limit unnecessary consumption of water throughout the County.

Action: Continue to encourage water conservation utilizing and promoting Jordan Valley Water Conservation outreach material with each City in the County.

Status: Not Accomplished.

Objective 1.2: Priority MEDIUM, Address agricultural water shortages in the County.

Action: In areas of agricultural use livestock water rotation has been setup (Herriman, Riverton, Draper and South Jordan, West Valley City and other areas in the Unincorporated County).

Status: Not Accomplished.

Objective 1.3: Priority MEDIUM, Encourage the development of secondary water systems.

Action: Coordinate with current water systems and develop and secondary waters systems plan for drought.

Status: Not Accomplished.

Problem Identification: Severe drought continues to maximize the potential for urban wildland interface fires in areas of the Cottonwood Canyons, Emigration Canyon, Rose Canyon, and Neff's Canyon (Unincorporated County) and Traverse/South Mountain and Bear Mountain (Draper City).

Goal 2: Reduce the amount of fuels that can impact residential homes in urban wild land interface areas.

Objective 2.1: Priority HIGH, Study the areas and determine which fire resistant natural vegetation can be used in these areas of concern.

Action: Develop outreach document specific to fire resistant natural vegetation.

Status: Not Accomplished.

Hazard: Earthquake

Problem Identification: Numerous geologic hazards exist in the Salt Lake City metropolitan area, which can constrain land use. Active fault zones pose the threat of earthquakes, while steep mountains adjacent to the city create a potential for landslides, debris flows, rock falls, and snow avalanches. Streams and the fluctuating level of the Great Salt Lake create serious flood and ground-water problems. Considered as a whole, geologic hazards in the Salt Lake City metropolitan area confront planners with a variety of safety and economic issues that must be addressed before wise development can take place. Limited communication or lack of communication capabilities is always a shortfall during an emergency.

Goal 1: Increase and harden emergency and non-emergency communication systems.

Objective 1.1: Priority HIGH, Provide redundancies in countywide communication systems.

Action: Assess current countywide communications and interoperable emergency/warning systems.

Status: Ongoing. Valley Emergency Communications Center (VECC) has been working with cities in the county to update communications, focusing on specific systems, which has included some or all of the following capabilities:

- *Radio system updated for 800 MHz, Ultra-High Frequency (UHF), Very High Frequency (VHF) and Amateur frequencies.*
- *Agency listing with gateway devices which enable disparate communications systems to link.*
- *VECC paging server capability to text message multiple units/personnel.*
- *Listing of Public Safety Satellite telephones in the County.*
- *VECC Dialogic Emergency Notification System, a reverse 911 system used to notify public or for notification of response agencies.*
- *Promoting narrow banding compliance prior to 2013 deadline.*
- *Salt Lake City is seeking grant funding to build and deploy communications trailer.*

Objective 1.2: Priority HIGH Ensure adequate coordination of disaster response and recovery activities.

Action: Assess EOC's (countywide).

Status: Ongoing. The County completed FEMA's Capability Gap Assessment in 2007.

Goal 2: Countywide earthquake loss reduction and safety education.

Objective 2.1: Priority MEDIUM, Provide information on earthquake potential effects to homeowners and developers.

Action: Update current earthquake maps (liquefaction and fault) and incorporated into the County GIS system.

Status: Accomplished. The information was updated by the Utah Geological Survey and provided to the County by request. Portions are available in the Statewide Geographic Database rather than on County GIS. The Central Utah Water Conservancy District has developed GIS based maps of the Red Butte Dam area in northeastern Salt Lake County that identifies earthquake hazards from ground shaking (peak ground acceleration), fault rupture, liquefaction, and landslides for both the 500 year and 2,500 year seismic events.

Objective 2.2: Priority HIGH, Improve public education regarding earthquake risks to improve quality of construction.

Action: Ensure current natural hazard ordinance(s) are online, linked to Emergency Services website, and easily accessible and can be download.

Status: Ongoing. County ordinances are available online and can be downloaded. However, the County website is not easily searchable to locate relevant ordinances and there needs to be a link established from the Emergency Management website to the County Clerk website.

Hazard: Flooding

Problem Identification: Although located in a semi-arid region, Salt Lake City is subject to cloudburst and snowmelt floods.

Goal 1: Protection of life and property before, during, and after a flooding event.

Objective 1.1: Priority MEDIUM, Encourage 100% participation in the National Flood Insurance Program

Action: Assist Holladay City and the Town of Alta to apply for participation in NFIP (National Flood Insurance Program).

Status: Ongoing. Holladay now participates in the NFIP, but Alta has not yet joined.

Objective 1.2: Priority MEDIUM Provide current FIRMs for emergency planners.

Action: Update & digitize floodplain maps.

Status: Ongoing. Floodplain maps have been digitized but have not been completely updated.

Goal 2: Reduce threat of unstable canals throughout the county.

Objective 2.1: Priority MEDIUM, Identify countywide canal systems.

Action: Map and assess for structural integrity canal systems in the County.

Status: Not Accomplished.

Objective 2.2: Priority LOW, Identify dry dams/reservoirs that may have the potential for failure.

Action: Map and assess all dry dams/reservoirs in the county.

Status: Ongoing. Dams are mapped and assessed by State Division of Water Rights and this information is reported to the County Emergency Management.

Hazard: Landslide

Problem Identification: Slope instability has not been a major problem in the Salt Lake area, but as development moves higher into the foothills and nearby canyons slope stability is becoming a major issue affecting future development.

Goal 1: Reduce or eliminate the threat of landslide damage.

Objective 1.1: Priority MEDIUM, Reduce the threat of landslides/debris flow following wild fires.

Action: Develop protocol for working with State and Federal agencies in developing impact of post fire debris flow hazard.

Status: Not Accomplished.

Objective 1.2: Priority MEDIUM Monitor historical landslide areas.

Action: Evaluate current landslide maps to verify accuracy.

Status: Accomplished. The Utah Geologic Survey has completed this task and provided an update to the County.

Objective 2.2: Priority MEDIUM, Improve public awareness regarding high-risk landslide areas.

Action: Have landslide maps readily available on line through County EM website.

Status: Accomplished. Countywide landslide susceptibility map may be found at: [map annex www.unifiedfire.org/emplans.html](http://map.unifiedfire.org/emplans.html).

Hazard: Severe Weather

Problem Identification: Snowstorms over northern Utah have a dramatic effect on regional commerce, transportation, and daily activity and are a major forecast challenge for local meteorologists.

Goal 1: Reduce the threat of life loss due to severe weather.

Objective 1.1: Priority LOW, Become National Weather Service (NWS) "Storm Ready Community".

Action: Contact NWS/SLC Office and begin process of becoming a Storm Ready Community.

Status: Accomplished. County, Salt Lake City, and Sandy participate in the program. Other cities qualify as participating under the County.

Objective 1.2: Priority LOW, Improve response times to severe weather alerts.

Action: Incorporate NWS on light boards on freeway system.

Status: Accomplished. The NWS and the Utah Department of Transportation cooperate to provide this information.

Objective 2.1: Priority LOW, Address Countywide needs of special populations that may be impacted by severe weather conditions.

Action: Create outreach materials (what to do when severe weather strikes) specific to this group and insert the information into County-wide phone books, and phone books specific to 55+ age group developed in County Aging services.

Status: Not Accomplished.

Action: Encourage avalanche preparedness for county backcountry users.

Status: Accomplished. The County participates with the Utah Avalanche Forecast Center to provide this information.

Objective 2.2: Priority MEDIUM, Prevent damage to critical facilities.

Action: Assess EOCs to ensure they are grounded lightning, to include buildings with towers, etc.

Status: Ongoing. The County Emergency Operations Center (EOC) and VECC have been surge protected. County is unsure of the status of other critical facilities.

Hazard: Wildfire

Problem Identification: Utah's typical fire season is the dry period from May through October. Lightning causes the largest numbers of wildfires. In 1990 Salt Lake County created a wildland program shortly after a wildland fire threatened Emigration Canyon, a major urban interface area at the county's eastern boundaries.

Goal 1: Wildfire community education.

Objective 1.1: Priority HIGH, Reduce overall risk from wild fire through education programs.

Action: Public awareness through "Fire Wise" programs.

Status: Ongoing. This objective has been partially accomplished by the development and implementation of the Regional Wildfire Protection Plan which the County participated in.

Objective 1.2: Priority HIGH, Educate homeowners on the need to create open space free of burnable fuels near structures in urban wild land areas.

Action: Create defensible space.

Status: Ongoing. The Regional Wildfire Protection Plan has been a catalyst for fuel clearing projects in Emigration Canyon, Rose Canyon and High Country Estates.

Tooele County

Hazard: Drought

Problem Identification: Large areas that lack sufficient precipitation to maintain ground water levels within the County, affecting culinary, agricultural and commercial/industrial uses.

Objective 1: Priority HIGH, Take actions to maintain adequate culinary water supplies.

Action: Develop a public awareness campaign to encourage water conservation.

Status: Not Accomplished. However the County encourages water conservation.

Action: Establish economic incentives for water conservation.

Status: Not Accomplished.

Objective 2: Priority MEDIUM, Protect water aquifers.

Action: Create and enforce zoning (land use) to protect primary recharge areas.

Status: Ongoing. The County has been conducting a groundwater study as part of a Tooele Valley Drought Management Plan.

Action: Watch countywide inventory data from public, private, and monitoring wells.

Status: Ongoing. Data is collected by the County Health Department and efforts are underway to provide for the sharing of the data.

Hazard: Wildland Fire

Problem Identification: Lack of code enforcement within and awareness of the Wildland Urban Interface.

Objective 1: Priority HIGH, Take actions to enforce the codes that are currently in place.

Action: Find personnel qualified to inspect property with regard to Wildfire Protection Standards

Status: Ongoing. The Tooele County Fire Warden conducts fire hazard inspections.

Objective 2: Priority MEDIUM, Educate persons living or working in these areas about the hazard.

Action: Present Fire Wise workshops for residents of high-risk areas.

Status: Ongoing. County produces a yearly calendar with natural and technological hazard and risk information. Fire Wise workshops have not been conducted.

Action: Inform people seeking building permits and realtors showing homes in these areas of the risk.

Status: Not Accomplished.

Action: Determine the specific areas where the Wildfire Protection Standards are in effect and make it available to the public in a graphic form.

Status: Not Accomplished.

Hazard: Severe Weather

Problem Identification: Severe weather related incidents result in a large number of disaster declarations and emergency response needs.

Objective 1: Priority MEDIUM, Educate more citizens about recognizing and knowing the dangers of severe weather hazards.

Action: Increase Weather Spotter training.

Status: Accomplished. The County had conducted annual Weather Spotter training since 2003.

Action: Increase Amateur Radio Operator Involvement in weather observations.

Status: Accomplished. County has worked with the NWS to provide precipitation gauges to amateur radio operators and weather spotters.

Note: Tooele County is a NWS Storm Ready county and therefore we have done just about everything possible to mitigate severe weather incidents. This objective is just one more step beyond what we have already accomplished.

Hazard: Infestation

Problem Identification: Negative economic impacts from grasshopper, Mormon cricket, and other types of insects.

Objective 1: Priority MEDIUM, Establish continuous funding sources for countywide insect control.

Action: Provide historical data and other information to raise awareness levels of elected and appointed officials regarding infestation impacts and ripple effects.

Status: Ongoing. The County works with federal and state agencies as part of an insect and pest control program.

Objective 2: Priority MEDIUM, Utilize historical data to forecast infestation cycles and monitor pest populations to implement early prevention strategies.

Action: Review research data and develop additional insect monitoring sites.

Status: Not Accomplished.

Hazard: Earthquake

Problem Identification: Development on identified fault traces increases the risk to life and property following an earthquake.

Objective 1: Priority HIGH, Reduce the threat to life and property within anticipated fault zones.

Action: Develop and implement land use ordinances.

Status: Not Accomplished.

Objective 2: Priority HIGH, Take advantage of continuing education opportunities for planners and policy officials.

Action: Attend ACT-21 classes.

Status: Not Accomplished.

Action: Collect building data for input into computer earthquake models.

Status: Ongoing. The County has a GIS staff position to share earthquake and other hazard data received from the state with county agencies.

Weber County

Hazard: Earthquake

Problem Identification: Non-structural hazards in the Weber County schools are a threat to students, facility, and employees and cause an increase in recovery activities following an earthquake.

Objective: Priority HIGH, Reduce the impact of non-structural events following an earthquake.

Action 1: Develop and implement an emergency operations plan similar to Salt Lake City school districts.

Status: In Progress.

Action 2: Develop a training document for schoolteachers showing non-structural mitigation activities for classrooms.

Status: Not Accomplished.

Problem Identification: Critical facilities (to include, but not limited to public safety, utilities, wastewater, water/sewer, schools, hospitals, public works and other critical facilities), need to be made less vulnerable from the impacts of earthquakes to allow to a more timely and efficient response and recovery.

Objective: Priority HIGH, Reduce the impact of non-structural events following an earthquake.

Action: Develop an earthquake vulnerability study for identified critical facilities.

Status: Ongoing. The Ogden School District has completed a structural and non-structural vulnerability survey. The school district is seismic retrofitting several school buildings and plans to retrofit Ogden High School to mitigate earthquake impacts. The Weber School District is planning to conduct a study in the future. There are no other known vulnerability studies completed in the county.

Problem Identification: Areas of high liquefaction (western Weber county: Hooper, Far West, West Warren, West Haven, Marriott-Slaterville, Plain City) are experiencing increased growth.

Objective: Priority HIGH, Increased awareness of high liquefaction areas.

Action: Include current liquefaction maps on the County website.

Status: Ongoing. The FEMA floodplain maps have been placed on the county website. The county is still planning to include the liquefaction data on the website.

Problem Identification: Development on identified fault traces increases the risk to life and property.

Objective: Priority HIGH, Promote natural hazards ordinance limiting development in high-risk areas.

Action: Make available copy of county natural hazards ordinance for cities within the county.

Status: Not Accomplished.

Hazard: Flood

Problem Identification: Communities not involved in the NFIP.

Objective: Priority MEDIUM, Make federal flood insurance available within communities and adopt flood loss prevention ordinances.

Action: Encourage the communities of Washington terrace and Huntsville to participate in the NFIP.

Status: Ongoing. The County has encouraged Washington Terrace, Huntsville and Marriott-Slaterville to participate in the NFIP. Washington Terrace has not been mapped and has no flood hazards. Marriott-Slaterville needs to be mapped. Huntsville has not joined either and may be out of the flood zone. The county will continue to work with the State DHLS.

Problem Identification: Storm water issues continue to be a critical flood issue in the county.

Objective: Priority MEDIUM, Implement and fund identified storm water projects to lessen impact of flooding in the county.

Action: Include current storm water plans and projects in hazard mitigation Plan.

Status: Ongoing. The County "Regional Storm Water Management Plan" was completed and submitted to the state in 2003.

Problem Identification: Weber County has an extensive canal system and canal breach or overtopping has and will continue to create a significant flood threat. A portion of this canal system is owned by the United States Bureau of Reclamation and operated by the Weber Basin Water Conservancy District (WBWCD).

Objective: Priority LOW, Evaluate canals in the county that may cause flooding.

Action: Identify canals in the county that have the potential to cause damage due to flooding. As a part of the WBWCD hazard mitigation planning process, the seismic vulnerability of these canals and the resulting possible flooding will be evaluated. The District is considering possible canal lining projects, primarily for water conservation purposes. However, these lining projects could also mitigate flood hazards due to canal failures as well. If these projects prove feasible, the District will seek PDM funds to augment District costs for implementation.

Status: Ongoing. Listed in Mitigation Plan.

Hazard: Severe Weather

Problem Identification: Most disaster declarations are generated from weather related incidents. Weber County continues to be impacted by snowstorms, hail, thunderstorms/lightning, tornados, heavy rain, and avalanche.

Objective: Priority MEDIUM, Reduce impact to life and property from severe weather related incidents

Action: Establish and support countywide National Weather Service Storm Ready program.

Status: Accomplished. Weber County is completing Storm Ready certification in 2008. Funding was received to purchase 50 National Oceanographic and Atmospheric Administration (NOAA) weather radios that were installed in City Offices, police and fire stations.

Action 2: Identify areas of avalanche risk and develop and post signs for avalanche danger.

Status: Not Accomplished.

Hazard: Wildland Fire

Problem Identification: Urban interface wildland fire continues to be of concern in areas of Uintah Highlands, Wolf Creek, North Ogden, and other areas of the Ogden Valley.

Objective: Priority HIGH, Reduce impact to life and property from urban interface wildland areas.

Action: Develop and implement a strong land use ordinance that addresses fuel reduction in areas at risk from fire.

Status: Accomplished. The County has passed a Wildland Fire Ordinance in conjunction with the Weber Fire District.

Action 2: Have communities participate in the Fire Wise Community programs.

Status: Ongoing. Uintah and Nordic Valley Communities participate in this program. County continues to encourage other communities to participate.

Hazard: Dam Failure

Problem Identification: Dam failure from federal, state and private dams can impact Weber County. Debris basin type dams are of concern at Birch Creek, Glassman Way, and on Harrison Blvd.

Objective: Priority MEDIUM, Reduce the impact of catastrophic flooding due to dam failure.

Action: Re-evaluate current high hazard dams and evaluate use of early warning sirens to warn public.

Status: Ongoing. The County is working with the Bureau of Reclamation to obtain accurate dam failure flood inundation maps.

Action 2: Identify and then fund dams needing armored concrete chutes.

Status: Not Accomplished.

Hazard: Landslide

Problem Identification: Weber County has significant areas of landslides.

Objective: Priority MEDIUM, Re-evaluate current landslide map.

Action: Update current landslide map and supporting data.

Status: Ongoing. Weber County Emergency Manager and state geologists toured the Ogden Valley (Huntsville and Eden). The county has a severe problem with the Norwood Tuff layer of soil on the south and west sides of the upper valley. Maps need to be updated with the state, posted on the county website and strict adherence to building codes in those hazard areas enforced.

Objective 2: Priority LOW, Monitor landslide movement in areas that impact infrastructure and population.

Action: Evaluate landslide areas where parameters can be used.

Status: Accomplished. The County currently uses the state monitoring system.

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